5G Super Blueprint: Network Slicing Proof of Concept

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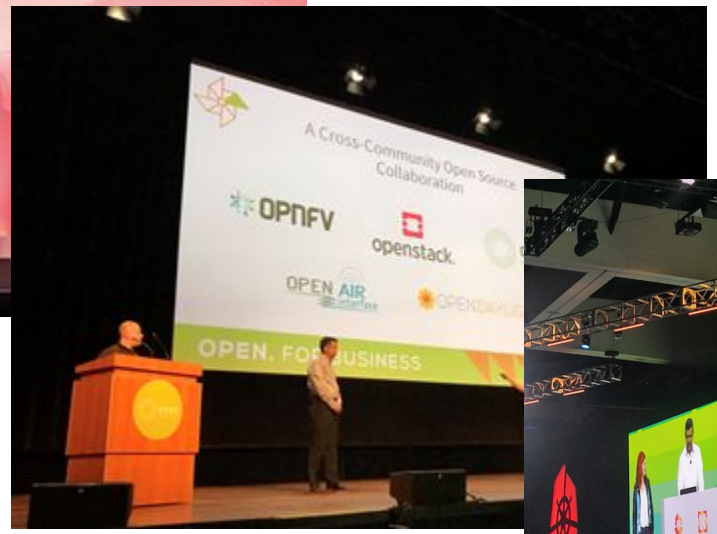
Networking Digital Transformation is a Right, not a Privilege.

Open Networking is the only viable path to scale Innovation.

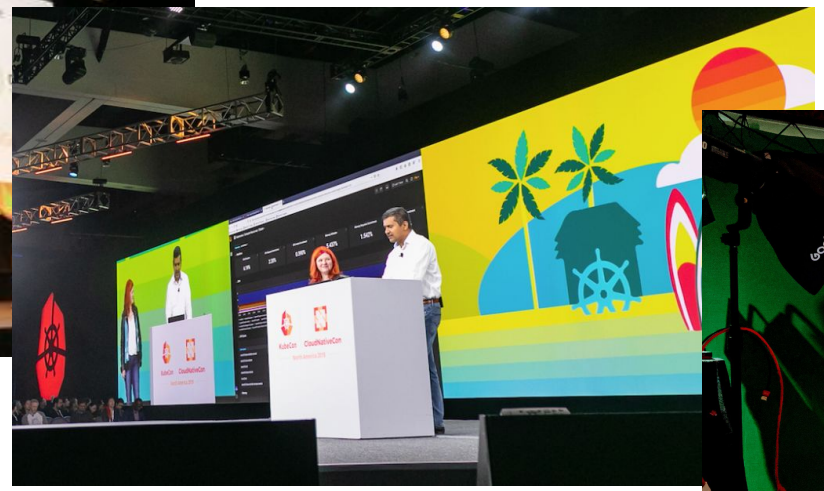
We are the Center of Gravity for Open Collaboration.

The 5G Super Blueprint Journey

2017: Initial VCO Demo



2018: LFN + OCP Edge Collaboration



2019: 5G Cloud Native Infrastructure

2020 (Virtual): ONAP Integration

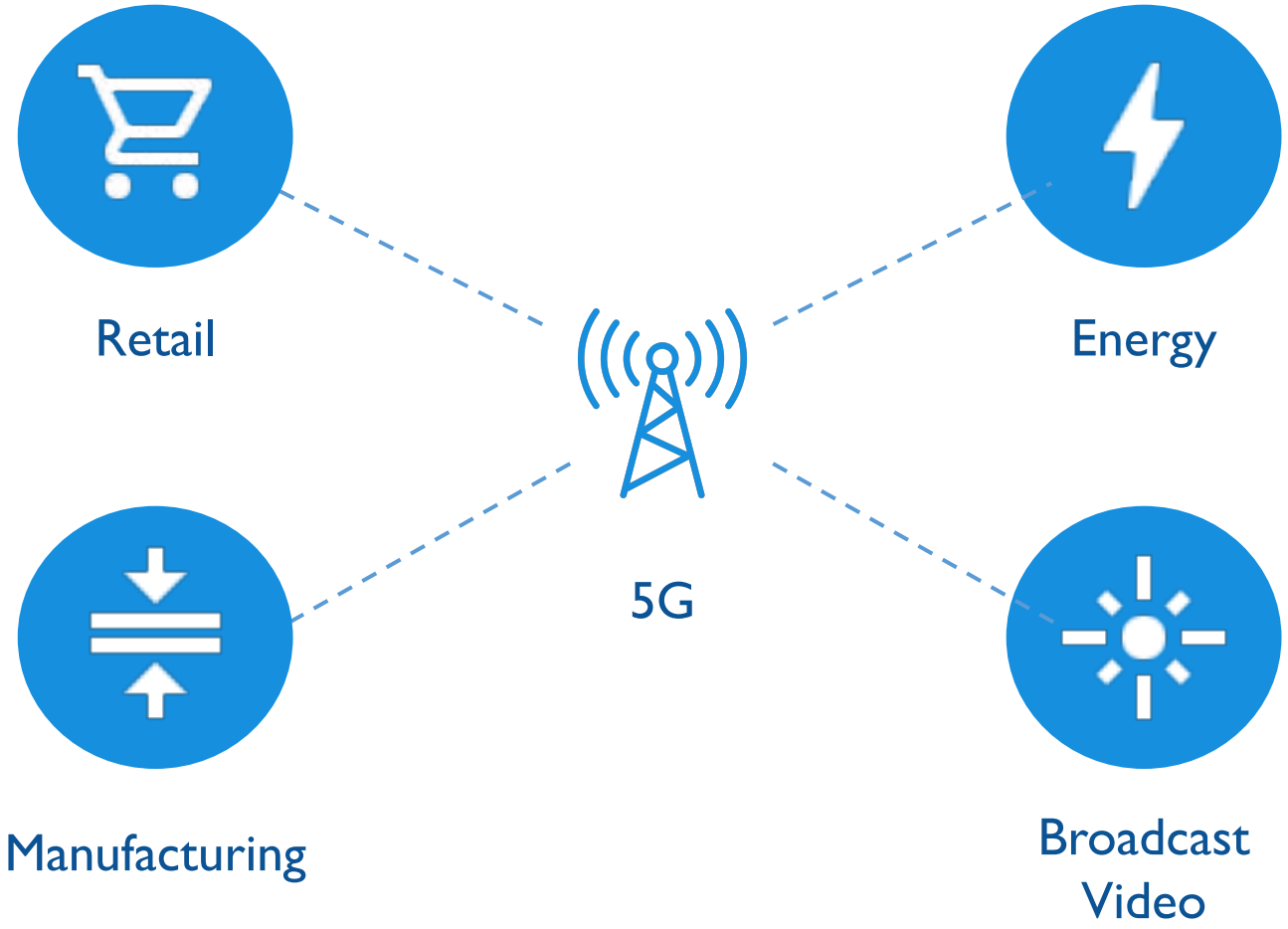
2021: End to End Network Slicing

- Provision a network slice from the back-office through the core to the edge and radio
- Integrate and Interoperate interfaces necessary for orchestrated slicing
- Demonstrate impact on video delivery use case
- Set the stage for full private mobile networking

Business Transformation: Value of Network Slicing

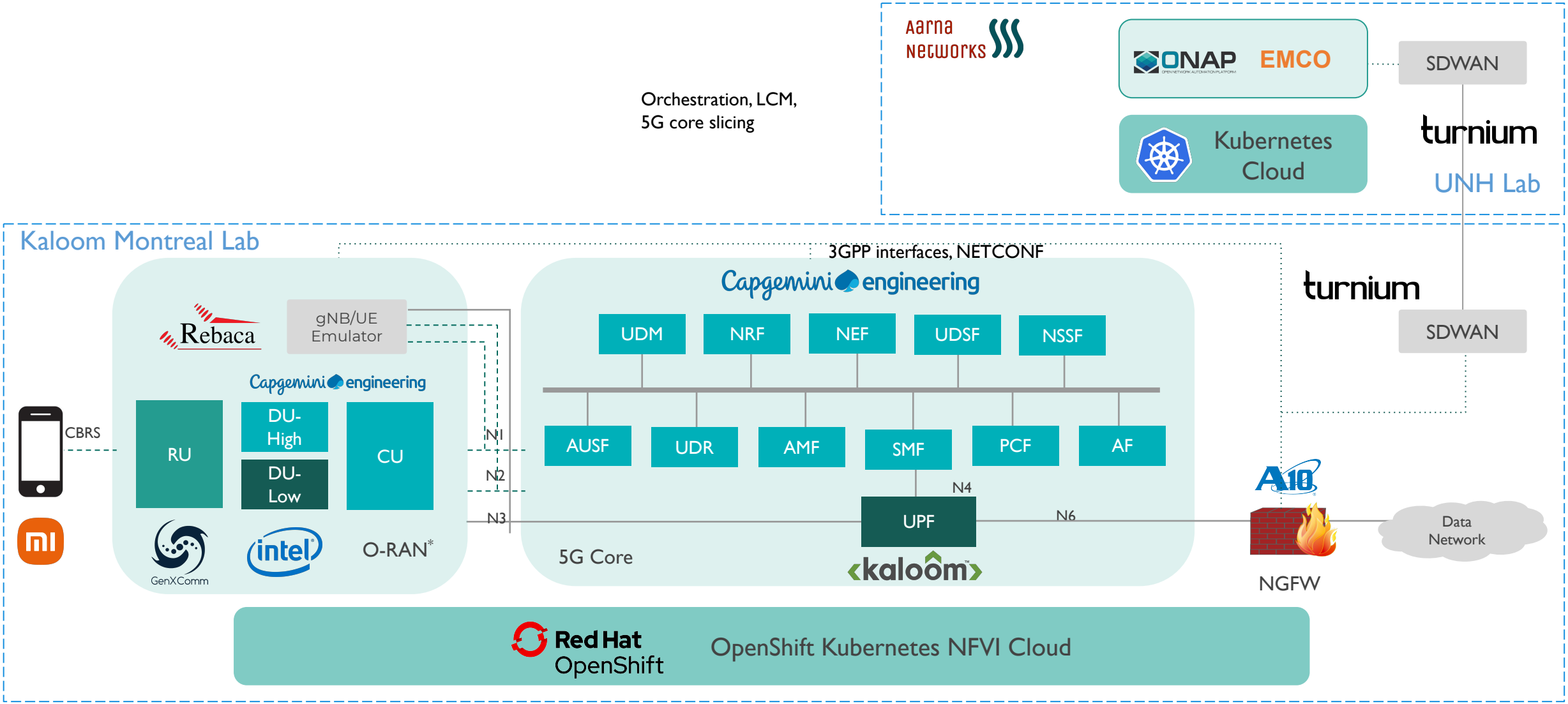
$200B opportunity by 2030*

- Enables customized network slices based on requirements of customers and industry segment
- Evolves 5G promise from “More is Better” to “Intelligent is Better”
- Creates opportunities to target specific vertical markets
- Paves way for IOT interconnection

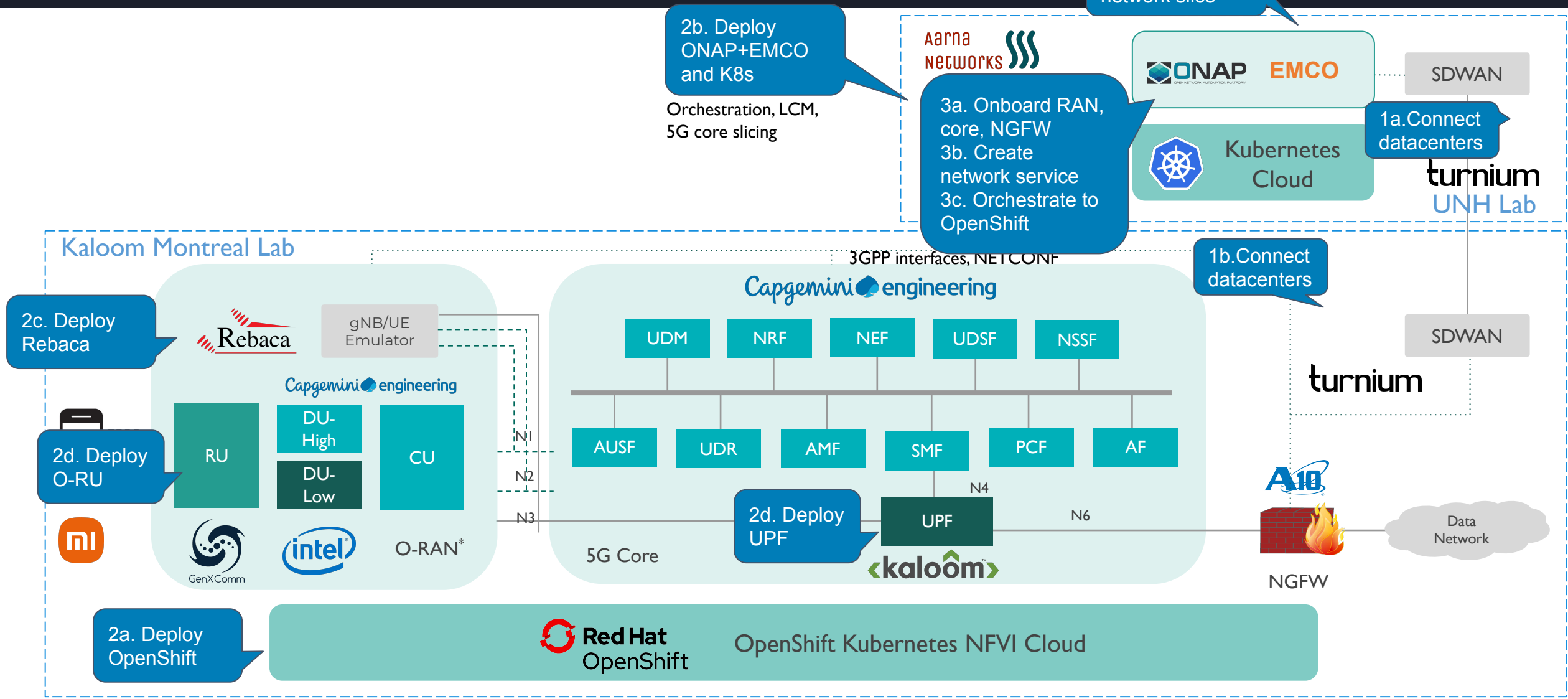


* Source: Arthur D Little Research, sponsored by Ericsson

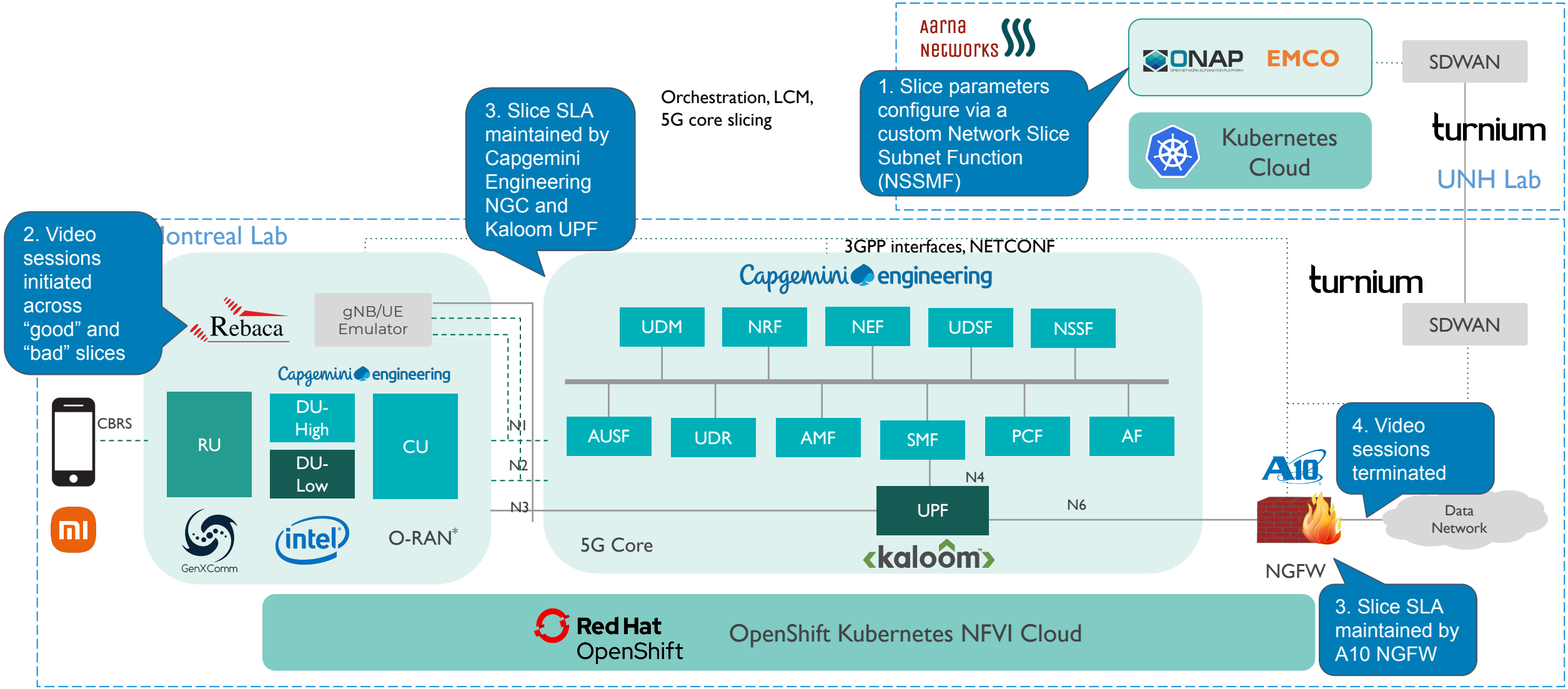
Networking Innovation: Cloud Native 5G Blueprint Network Architecture



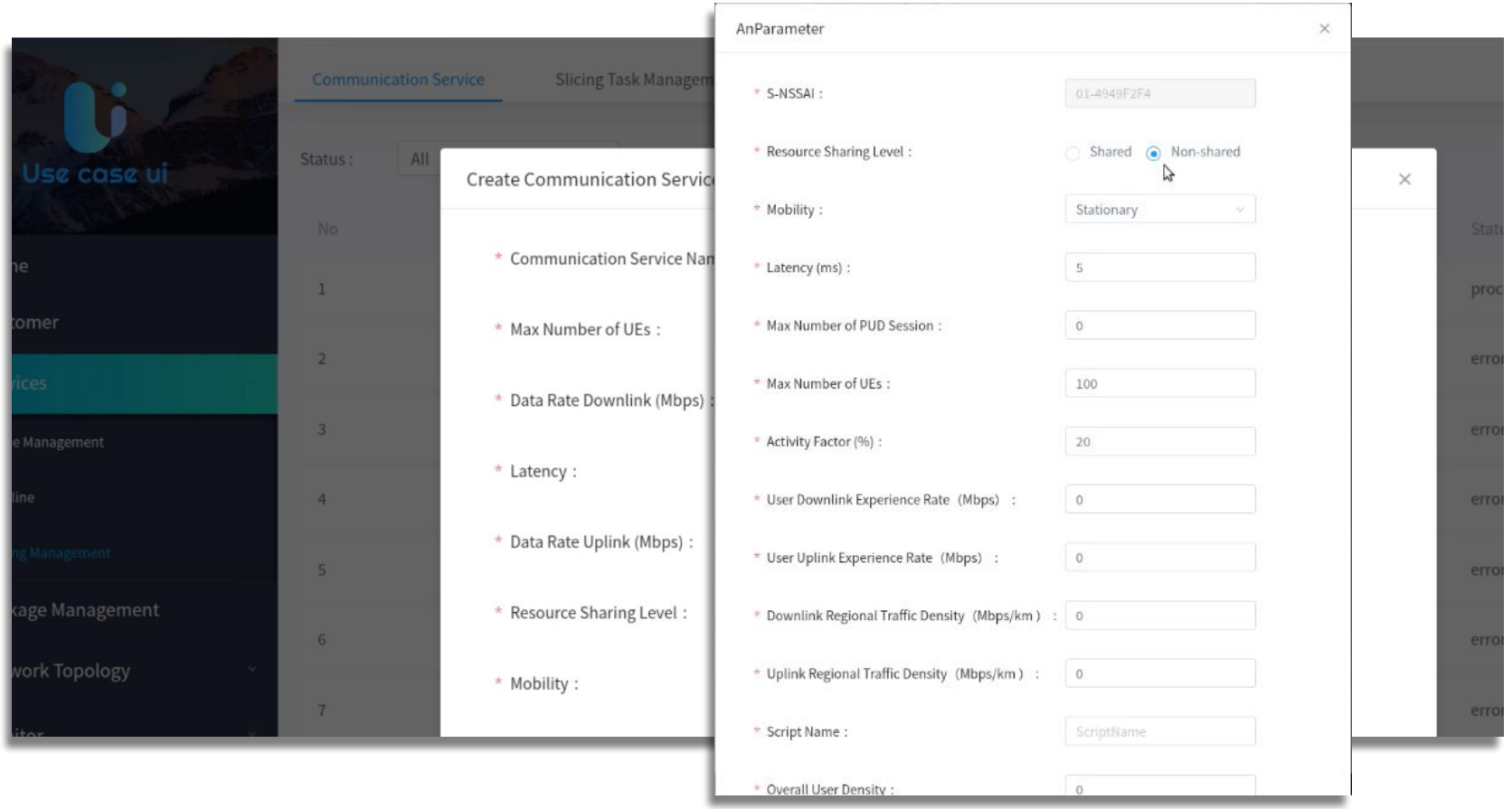
Cloud Native 5G Blueprint Network Architecture: Provisioning Flow



Cloud Native 5G Blueprint Network Architecture: Data Path Flow



Using ONAP to Create Network Slices



- Two slices created
  - “Good Slice” 5Mbps
  - “Bad Slice” 2.5Mbps
- ONAP Communication Service Management Function (CSMF) and Network Slice Management Function (NSMF) user interfaces to input slice details
- Slice information sent to 5GC via custom developed Network Slice Subnet Management Function (NSSMF)

Network Slicing Demo

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Community Collaboration is Key

Thanks: Participating Organizations

A10

Aarna Networks

Capgemini engineering

GenXComm

intel

iol
University of New Hampshire
InterOperability
Laboratory

kaloom

Rebaca

Red Hat

turnium

Thanks! The People Are the Power

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Soumya Pal, Rebaca
Pradnesh Dange, Rebaca
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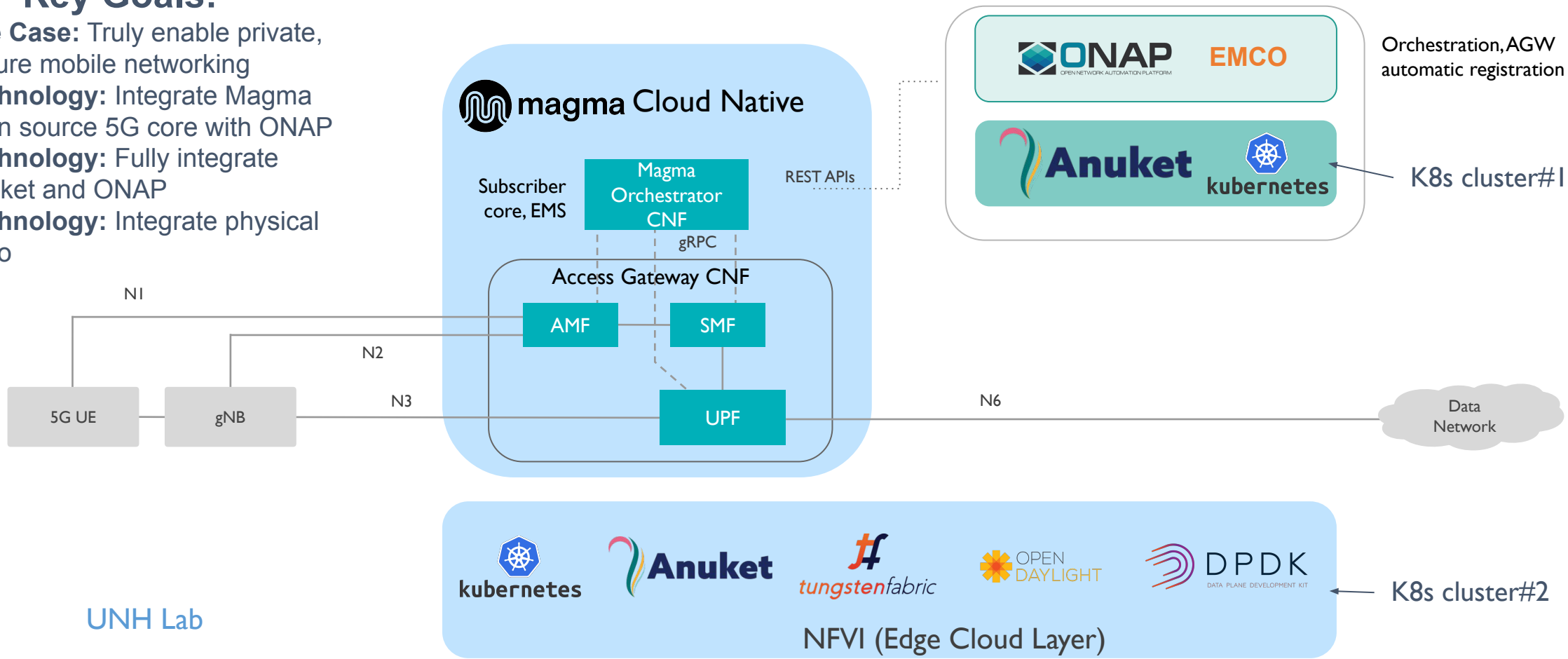
Josh Hicks, Turnium
James Oakley, Turnium
Boris Mimeur, CENGN
Lincoln Lavoie, IOL-UNH
Sawyer Bergeron, IOL-UNH
Brandon Wick, Linux Foundation
Louis Illuzzi, Linux Foundation

Active participants for this version of the 5G Super Blueprint

5G Super Blueprint Next Phase

Key Goals:

- **Use Case:** Truly enable private, secure mobile networking
- **Technology:** Integrate Magma open source 5G core with ONAP
- **Technology:** Fully integrate Anuket and ONAP
- **Technology:** Integrate physical radio



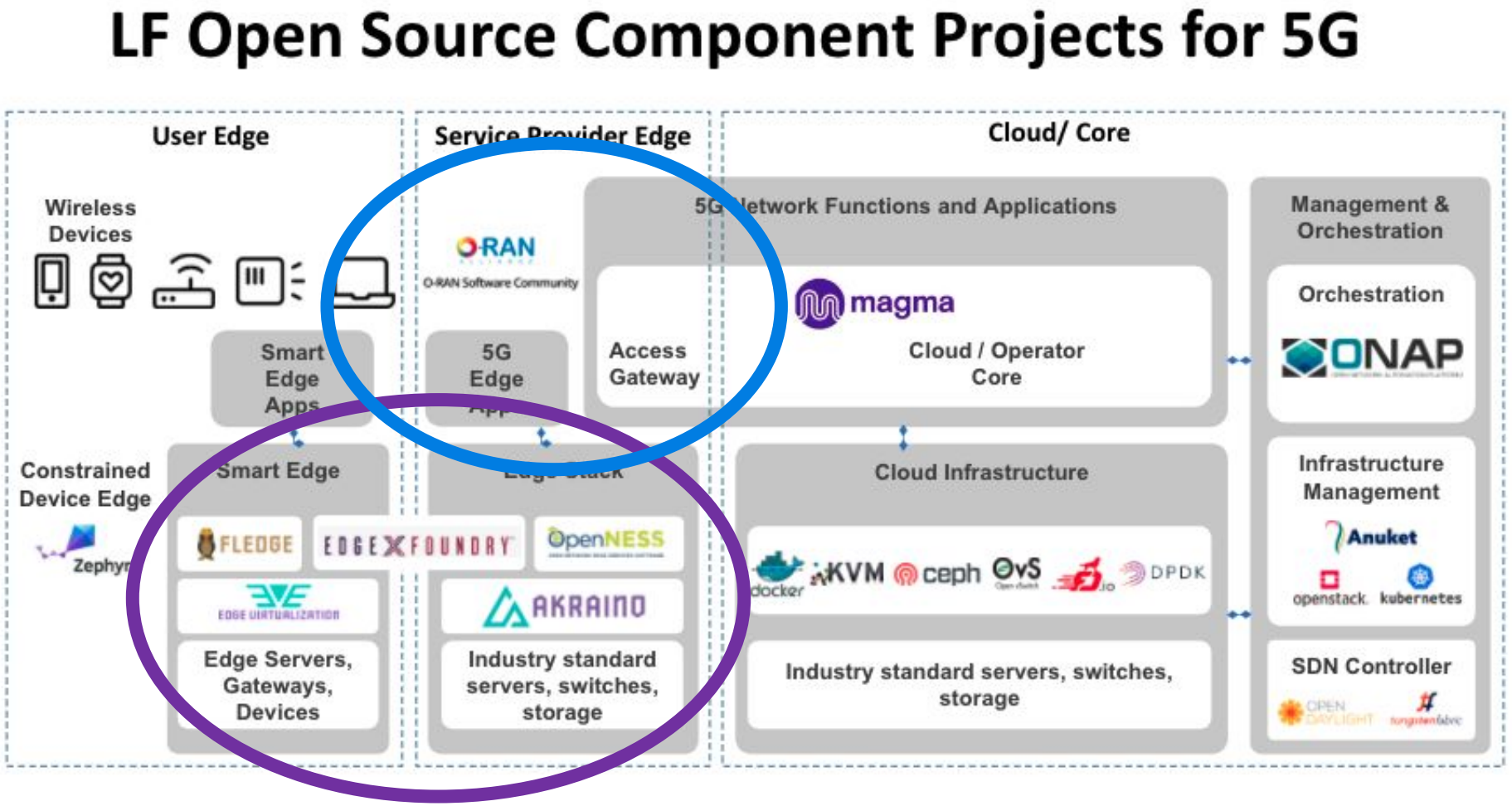
5G Super Blueprint: Future Phases

5G + IOT

- Full 5G and Edge IOT inter-networking
- Build upon private mobile networking to the Edge
- Fully enable use cases such as Smart Manufacturing and Retail

Open RAN

- Integration with ORAN SC
- Deploy open source from the core to the radio
- Demonstrate end-to-end open source interoperability
- Set stage for future compliance activities



Learn More and Get Involved

Learn More: https://www.lfnetworking.org/5g-super-blueprint/

Read the FAQ:
https://wiki.lfnetworking.org/display/LN/5G+Super+Blueprint+FAQ

Get Involved:
https://wiki.lfnetworking.org/display/LN/LFN+Demo%3A+5G+Super+Blueprint

Behind the Scenes video: Hanen wins an Emmy!

Available in the Linux Foundation Demo Pavilion (and on YouTube)
https://youtu.be/YF5mTRE1wDs

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Innovate.

Collaborate.

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